

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-32 (canceled)

33. (previously presented) An electrical connector assembly adapted for forming a mechanical and an electrical connection between a substrate and a component having an array of fusible elements thereon, comprising:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of reflowable elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said second surface having a first array of connecting elements, said reflowable elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting elements thereon for electrical and mechanical connection to the array of fusible elements on the component, said mounting elements substantially devoid of solder mass of a volume sufficient for reflowing said second connector half to the component, said second surface having a second array of connecting elements adapted to intermate with said first array of connecting elements, said mounting elements electrically connected to said second array of connecting elements.

34. (previously presented) The connector assembly according to claim 33, wherein said array of mounting elements on said second connector half is arranged to correspond to the array of fusible elements on the component.

35. (previously presented) The connector assembly according to claim 34, wherein each of said mounting elements on said second connector half is situated in a recess.

36. (previously presented) The electrical connector of claim 33, wherein said array of reflowable elements on said first connector half is an array of ball-type contacts.

37. (previously presented) The electrical connector of claim 33, wherein said array of mounting elements on said second connector half is adapted to receive an array of ball-type contacts on the component.

38. (previously presented) The electrical connector of claim 33, wherein said array of reflowable elements on said first connector half is one of a column grid array, ceramic ball grid array, tab ball grid array, and plastic ball grid array.

39. (previously presented) The electrical connector of claim 33, wherein each connecting element on said first connector half comprises two elongated members and each connecting element on said second connector half comprises one elongated member.

40. (previously presented) An electrical connector assembly adapted for forming a mechanical and electrical connection between a substrate and a component having an array of fusible elements thereon, comprising:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of reflowable elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said second surface having a first array of connecting elements, said reflowable elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting tail contacts thereon for electrical and mechanical connection to the array of fusible elements on the component, said second surface having a second array of connecting elements adapted to intermate with said first array of connecting elements, said mounting tail contacts electrically connected to said second array of connecting elements, wherein each of said mounting tail contacts is spaced apart from said second connector half by an air gap until reflow.

41. (previously presented) The electrical connector of claim 40 wherein said array of mounting tail contacts on said second connector half is arranged to correspond to the array of fusible elements on the component.

42. (previously presented) The electrical connector of claim 41 wherein each of said mounting tail contacts on said second connector half is situated in a recess.

43. (previously presented) The electrical connector of claim 40, wherein said array of reflowable elements on said first connector half is an array of ball-type contacts.

44. (previously presented) The electrical connector of claim 40, wherein said array of mounting elements on said second connector half is adapted to receive an array of ball-type contacts on the component.

45. (previously presented) The electrical connector of claim 40, wherein said array of reflowable elements on said first connector half is one of a column grid array, ceramic ball grid array, tab ball grid array, and plastic ball grid array.

46. (previously presented) The electrical connector of claim 40, wherein each connecting element on said first connector half comprises two elongated members and each connecting element on said second connector half comprises one elongated member.

47. (previously presented) An electrical connector assembly adapted for forming a mechanical and electrical connection between a substrate and a component having an array of fusible elements thereon, comprising:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of reflowable elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said second surface having a first array of connecting elements, said reflowable elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting tail contacts thereon for electrical and mechanical connection to the array of fusible elements on the component, said second surface having a second array of connecting elements adapted to intermate with said first array of

connecting elements, said mounting tail contacts electrically connected to said second array of connecting elements, wherein each of said mounting tail contacts extends into and terminates in an opening formed in said first surface of said second connector half, and remains separated from the second connector half by an air gap until reflow with the array of fusible elements on the component.

48. (previously presented) The electrical connector of claim 47 wherein said array of mounting tail contacts on said second connector half is arranged to correspond to the array of fusible elements on the component.

49. (previously presented) The electrical connector of claim 47, wherein said array of reflowable elements on said first connector half is an array of ball-type contacts.

50. (previously presented) The electrical connector of claim 47, wherein said array of mounting elements on said second connector half is adapted to receive an array of ball-type contacts on the component.

51. (previously presented) The electrical connector of claim 47, wherein said array of reflowable elements on said first connector half is one of a column grid array, ceramic ball grid array, tab ball grid array, and plastic ball grid array.

52. (previously presented) The electrical connector of claim 47, wherein each connecting element on said first connector half comprises two elongated members and each connecting element on said second connector half comprises one elongated member.

53. (new) An electrical connector assembly adapted for forming a mechanical and an electrical connection between a substrate and a component having an array of fusible elements thereon, comprising:

a first connector half, said first connector half having first and second surfaces, said first surface having an array of surface mounting elements thereon for electrical and mechanical connection to corresponding mating elements already on the substrate, said

second surface having a first array of connecting elements, said surface mounting elements electrically connected to said first array of connecting elements; and

a second connector half, said second connector half having first and second surfaces, said first surface having an array of mounting elements thereon for electrical and mechanical connection to the array of fusible elements on the component, said mounting elements substantially devoid of solder mass of a volume sufficient for reflowing said second connector half to the component, said second surface having a second array of connecting elements adapted to intermate with said first array of connecting elements, said mounting elements electrically connected to said second array of connecting elements.

54. (new) The connector assembly according to claim 53, wherein said array of mounting elements on said second connector half is arranged to correspond to the array of fusible elements on the component.

55. (new) The connector assembly according to claim 54, wherein each of said mounting elements on said second connector half is situated in a recess.

56. (new) The electrical connector of claim 53, wherein said array of surface mounting elements on said first connector half is an array of ball-type contacts.

57. (new) The electrical connector of claim 53, wherein said array of mounting elements on said second connector half is adapted to receive an array of ball-type contacts on the component.

58. (new) The electrical connector of claim 53, wherein said array of surface mounting elements on said first connector half is one of a column grid array, ceramic ball grid array, tab ball grid array, and plastic ball grid array.

59. (new) The electrical connector of claim 53, wherein each connecting element on said first connector half comprises two elongated members and each connecting element on said second connector half comprises one elongated member.

60. (new) An electrical connector assembly adapted for forming a mechanical and an electrical connection between a substrate and a component having an array of fusible elements thereon, comprising:

a connector half, said connector half having first and second surfaces, said first surface having an array of mounting elements thereon for electrical and mechanical connection to the array of fusible elements on the component, said mounting elements substantially devoid of solder mass of a volume sufficient for reflowing said connector half to the component, said second surface having a first array of connecting elements adapted to intermate with a second array of connecting elements, said mounting elements electrically connected to said first array of connecting elements.

61. (new) The connector assembly according to claim 60, wherein said array of mounting elements on said connector half is arranged to correspond to the array of fusible elements on the component.

62. (new) The connector assembly according to claim 61, wherein each of said mounting elements on said connector half is situated in a recess.

63. (new) The electrical connector of claim 60, wherein said array of mounting elements on said connector half is adapted to receive an array of ball-type contacts on the component.